File Staging through DMZ File Servers

Category: File Transfers

The NAS DMZ (Demilitarized Zone) file transfer servers, dmzfs1.nas.nasa.gov and dmzfs2.nas.nasa.gov, are designed to help facilitate file transfers into and out of the NAS enclave. All Lou users have an account on the DMZ file servers.

Design

- Each DMZ server is independent; they do not share filesystems or data.
- The DMZs do not support RSA SecurID authentication, so, the RSA key fob is not needed, and setting up SSH passthrough is not required. Instead, a password or public/private key pair should be used for authentication
- SCP and bbFTP are supported file transfer protocols.

Setup

To set up public key authentication for the DMZs, copy the public key, which you have likely already created on your local host, to the *authorized_keys* file of dmzfs1 and/or dmzfs2:

```
localhost% scp ~/.ssh/id_rsa.pub nas_username@dmzfs1.nas.nasa.gov:~/.ssh
localhost% ssh nas_username@dmzfs1.nas.nasa.gov
dmzfs1% cat ~/.ssh/id_rsa.pub >> ~/.ssh/authorized_keys
```

- Files should be pushed to or pulled from the DMZs.
- Unattended file transfers via the DMZs can be done with public key authentication. Files generated inside the NAS HECC Enclave can be pushed to the DMZ file servers under script control (but *not through PBS jobs*). Likewise, remote systems can automatically push files to the DMZ file servers. Then, scripts operating on Pleiades or Columbia can periodically check for file availability on the DMZ file servers, and when available, will pull the file into Pleiades or Columbia.

Restrictions

- The user environments are jailed; executable commands are minimal.

- Outbound connections are not allowed. File transfers via the DMZ file servers using commands such as *scp* or *bbftp* must be initiated from your local host or NAS

systems (such as Pleiades, Columbia, Lou) *not* dmzfs1 or dmzfs2.

- Storage space is limited (users share 2.5TB), and files are meant to be stored for very short durations. Every hour, files older than 24 hours are automatically removed.

Examples

The following examples assume that: a) You want to push a file to dmzfs1 from your local host and pull the file from pfe1; b) You have not set up public key authentication for the DMZs. Thus, password authentication is used.

- Using *scp,* first copy the file to the DMZ:

```
localhost% scp foo dmzfs1.nas.nasa.gov:
Password: <-- type in your lou password
foo 100% 764 0.8KB/s 00:00
```

If your NAS username and local username are different:

```
localhost% scp foo nas_username@dmzfs1.nas.nasa.gov:
Password:   <-- type in your lou password
foo                 100%  764     0.8KB/s   00:00
```

then, you can pull the file from the DMZ:

```
pfe1% scp dmzfs1:foo .
Password:  <-- type in your lou password
foo                 100%  764     0.8KB/s   00:00
```

- Using *bbftp,* first copy the file to the DMZ:

```
localhost% bbftp -s -e 'put foo' dmzfs1.nas.nasa.gov
Password: <-- type in your lou password
foo 100% 764 0.8KB/s 00:00
```

If your NAS username and local username are different:

```
localhost% bbftp -s -u nas_username -e 'put foo' dmzfs1.nas.nasa.gov
Password:   <-- type in your lou password
put foo OK
```

then, you can pull the file from the DMZ:

```
pfe1% bbftp -s -e 'get foo' dmzfs1
Password:   <-- type in your lou password
get foo OK
```

See the article on bbftp for more instructions.

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